U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2011-0087-EA

CASEFILE/PROJECT NUMBER: COC64841
COC75212 (pipeline ROW)
COC75213 (water line ROW)
COC75212-01 (temporary use permit)

PROJECT NAME: Buckhorn Draw Unit well pad: COC64841: 25-1-199

LEGAL DESCRIPTION: T1S, R99W, Sections 25 (NENE), 6th PM

APPLICANT: Mesa Energy Partners, L.L.C.

PURPOSE & NEED FOR THE ACTION:

The purpose of the action is to allow the development of Federal Leases on Bureau of Land Management (BLM) surface through the drilling of the proposed well and associated actions. The need for the action is established by the BLM's responsibility under the authority of the Mineral Leasing Act of 1920 as amended by the Federal Land Policy and Management Act of 1976 (FLPMA) to respond to the request to develop the Federal Leases.

Decision to be Made: The BLM will decide whether or not to approve the APD, and if so, under what conditions.

SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:

Scoping: Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 4/11/2011. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on 5/10/2011.

Issues: No issues were identified during public scoping.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: The White River Field Office (WRFO) received Notices of Staking (NOSs) on March 19, 2010 for well BDU 25-1-199 within the eastern boundary of Mesa Energy Partners, LLC's (Mesa's) Buckhorn Draw Unit (BDU). This was followed by an onsite inspection on April 22, 2010. The Application for Permit to Drill (APD) was received on July 30, 2010, the location was subsequently moved due to cultural resource concerns and a new APD was received February 24, 2011.

This Environmental Assessment (EA) has been prepared to analyze the potential impacts that could result from Mesa Energy drilling the proposed wells and associated actions such as constructing the proposed well pad and access road, and installing the proposed pipeline.

Proposed Action: Mesa proposes to construct one well pad and drill one well (BDU 25-1-199) on that pad. The proposed action includes constructing one 320 ft x 400 ft well pad and drilling one well on the pad (see Table 1). The proposal indicates the applicant would construct a 190 ft (0.03 mi) access road off of CR 24X. In addition, the applicant will install 4,320 ft (0.82 mi) of gas gathering and produced waterline. The lines would be installed adjacent to the access road, then northwest along CR-24X, then northeast along an existing abandoned air strip to a tie-in point along the Stake Springs Gathering line. Total acres disturbed including overburden to construct the well pad, access road, and pipeline corridor would be approximately 10.56 acres (see Table 1 for pad dimensions and total area disturbed).

Table 1. Pad dimensions and acres disturbed for the proposed well pads and access roads.

Well Pad	Pad Dimensions (ft)	Pad Disturbance[a] (Acres)	Access Dimensions (ft)	Access Disturbance[a] (Acres)	Pipeline Dimensions (ft)	Pipeline Disturbance[c] (Acres)	Total Site Disturbance[b] (Acres)
25-1-199	320 x 400	5.6	190 x 50	0.22	4,320 x 50	4.95	10.56

[a] Estimate includes total acres disturbed for pad surface and overburden.
[b] Estimate includes total acres disturbed for well pad, proposed access road and pipeline corridor.
[c] Estimate pipeline disturbance is based on a 50ft ROW working surface during construction, reclamation ROW will be 14-16 ft.

Design Features:
The Surface Use Plan of Operation (SUPO) and APD for well BDU 25-1-199 is incorporated by reference, and summarized below:

Access
Plans for improvement and/or maintenance of existing roads are to maintain in as good or better conditions than at present. All access roads will be constructed and maintained so as to meet BLM Manual Section 9113 standards for road shape and drainage features at all times during construction, drilling, and production. Running surface width will be approximately 18 ft- 20 ft, and total disturbed width will be no more than 50 ft. A regular maintenance plan will include, but will not be limited to blading, ditching, and surfacing.

Well Site
All above ground structures will be painted to blend with the surrounding landscape per BLM recommendations. The typical paint color for this area is Juniper Green (no Munsell color). All production facilities will be painted within six months of installation.

Roads and well production equipment such as tanks, treaters, separators, vents, etc, will be placed on location so as to permit maximum interim reclamation of disturbed areas. If equipment is found to interfere with the proper interim reclamation of disturbed areas, the equipment may be moved so proper re-contouring and revegetation can occur.

Up to six inches of topsoil will be removed prior to location construction. Topsoil will be stockpiled in a windrowed pile adjacent to the well-site along the western and southern edges of the pad. Topsoil and spoils material piles will be clearly separated.

Run off and sediment control BMPs (Best Management Practices) will be implemented and maintained according to the Buckhorn Draw Stormwater Management Plan. To control drainage, the BMPs proposed for this location include a perimeter ditch/berm, cut slope diversion, wattles, and slash.

Ancillary Facilities
A produced water staging area, Big Duck Creek Water Staging Facility, has been previously permitted and constructed by Mesa Energy in NWSE of Sec. 11, T1S, R99W to handle produced water from this and future wells. Produced water will be piped to this location via the Stake Springs Gathering System and trucked from this facility to the Pinyon Ridge Fed C1W disposal well located in NESE of Sec. 21, T3N, R97W for disposal.

Pipelines
The following will apply to the pipeline installation:

A. All buried pipelines will be buried to a minimum of three to four ft, except at road crossings where they will be buried to a depth of at least four ft.
B. Construction width of the pipeline right-of-way shall be restricted to 50 ft of disturbance.
C. Reclamation width of the pipeline right-of-way shall be approximately 14 - 16 ft.
D. The length of the proposed pipeline to the tie-in at an existing buried gas line isapproximately 4,320 ft.
E. The proposed gathering line and the produced water line will both follow in the same trench. The lines will tie into established lines in the NWSW of Sec. 19, T1S, R99W, leading to the Stakes Springs Compressor Station and the Big Duck Creek Staging Facility (see Ancillary Facilities).

Water Supply and Disposal
Water to be used for the drilling and completing of this well may be delivered to the location via (1) pumping through a water pipeline, or (2) hauling by truck over the roads utilizing CR-24, CR-24X, CR-5, CR-86, and Dry Fork Road. The water source may be from (1) recycled flow back water (frac water from completions), production water gathered from producing wells, or some combination thereof resulting from ongoing operations in the Piceance Basin that may be treated for reuse, or (2) fresh water from available water rights in the Piceance Basin.

The fresh water providers are Williams and EnCana. Due to possible summer water restrictions it is imperative that multiple sources be available for use. Williams' fresh water will come from their nearby Ryan Gulch fresh water loadout located at 39.864375 latitude and -108.430068 longitude, NAD83, and will utilize CR-24X, CR-24, and CR-86. EnCana's fresh water source will come from the Foote Ranch loading facility located at 40.008838 latitude and -108.24631 longitude, NAD83, and will utilize CR-24X, CR-24, CR-5, and Dry Fork Road.

Mesa Energy estimates that they will use approximately 5,000 bbls of fresh water for drilling, and approximately 50,000 bbls of either fresh or recycled water for completions. The amount of water used for dust abatement is estimated to be ~1,000 bbls/year. If it becomes necessary to truck water, CR-24, CR-24X, CR-5, CR-86, and Dry Fork Road will be utilized.

Waste Disposal

The following are the plans for waste disposal and reserve pit construction:

A. Drill Cuttings will be buried in the reserve pit when dry.

B. Drilling fluid will be evaporated, and then buried in the reserve pit when dry.

C. Completion fluids will be flowed to the reserve pit and allowed to evaporate.

D. Reserve pit dimensions are 80 ft wide x 120 ft long x 15 ft deep.

E. The reserve pit will be constructed to BLM Goldbook, Onshore Order #1 and #7 standards, and to meet the requirements of the Colorado Oil and Gas Conservation Commission (COGCC). Reserve pit will be lined with a synthetic liner 24 mil or thicker. The reserve pit liner shall be made of any manmade synthetic material of sufficient size and qualities to sustain a hydraulic conductivity no greater than 1×10^{-7} cm/sec after installation and which is sufficiently reinforced to withstand normal wear and tear associated with the installation and pit use thereof. The liner shall be chemically compatible with all substances that may be put into the pit.

F. Reserve pit will be fenced on three sides during drilling operations and on the fourth side at the time of rig release. The pit will remain fenced until backfilled.

G. The reserve pit will include appropriate netting, or fencing and escape ramps as necessary to protect public health, safety, and welfare and prevent adverse environmental impacts resulting from access to a pit by wildlife, migratory birds, domestic birds, or members of the general public, in accordance with applicable BLM and COGCC rules and regulations.

H. Flare pit for air drilling will (if used) be located a minimum of 100 ft from the well bore.

I. Produced fluid water will be piped to the Big Duck Creek Water Staging Facility during completion and testing. The Pinyon Ridge Fed C1W disposal well will handle produced fluids trucked from the Big Duck Creek Water Staging Facility.

J. Drilling fluids, including salts and chemicals, will be contained within the reserve pit. If a closed loop drilling system is proposed, a separate SN will be submitted with proposed handling of drill cuttings and fluids. Upon termination of drilling and completion operations, the drilling mud and cuttings will be tested per BLM and COGCC regulations and a disposal plan will be submitted to BLM via Sundry Notice.

Disposal will be completed within ninety (90) days after termination of drilling and completion activities. Any off-site disposal will be identified in the Sundry Notice.

K. In the event that adverse weather conditions prevent removal of the fluids from the mud system within this time period, an extension may be granted by the Authorized Officer (AO) upon receipt of a written request from Mesa.

L. Produced Fluids – liquid hydrocarbons produced during completion operations will be treated and stored on lease until such time they can be properly gauged and sold, according to BLM requirements.

M. Sewage disposal facilities will be in accordance with state and local regulations. Sewage may not be buried on location or put in a borehole. Colorado Department of Public Health and Environmental (CDPHE) regulations prevent this unless a CDPHE permit is obtained. A proposed disposal site is the Rio Blanco County (RBC) Solid Waste Landfill. If another disposal site is selected, the BLM will be notified via Sundry Notice.

N. Garbage and other waste – burnable waste will be contained in a portable trash cage which will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at a CDPHE approved sanitary landfill upon completions of operations. A proposed disposal site is the RBC Solid Waste Landfill. If another disposal site is selected, the BLM will be notified via Sundry Notice.

O. Trash will be picked up, if scattered, and contained in a trash cage as soon as practical after the rig is moved off location.

P. Upon release of the drilling rig, rathole and mousehole will be filled. Debris and equipment not required for production will be removed.

Q. Any reportable spills of oil, gas, salt water, or other potentially hazardous substances will be reported immediately to the BLM, and other responsible parties, and will be mitigated immediately, as appropriate, through clean up or removal to an approved disposal site.

Reclamation

General

A. Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment.

B. Earthwork for interim and final reclamation must be completed within six months of well completion or plugging (weather permitting).

C. In areas that will not be drill-seeded, the seed mix will be broadcast seeded at twice the application rate shown and covered 0.25 to 0.5 inches deep with a harrow or drag bar or will be broadcast-seeded into imprints, such as fresh dozer cleat marks.

D. Fall seeding is preferred and will be conducted after September 15 and prior to ground freezing. Spring seeding will be conducted after the frost leaves the ground.

E. Annual or noxious weeds shall be controlled on all disturbed areas as directed by the Field Office Manager. An intensive weed monitoring and control program will be implemented beginning the first growing season after interim and final reclamation.

Noxious weeds that have been identified during monitoring will be promptly treated and controlled. A Pesticide Use Proposal (PUP) will be submitted to the BLM for approval prior to the use of herbicides. All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species. The operator will coordinate all weed and insect control measures with state and/or local management agencies.

F. Reclaimed areas will be monitored annually. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical.

G. Reclamation monitoring will be documented in a reclamation report and submitted to the WRFO.

H. The AO will be informed when reclamation has been completed, is successful, and the site is ready for final inspection.

Interim Reclamation (Production)

A. Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area, back sloping, and contouring all cut and fill slopes. These areas will be re-seeded.

B. Well pad size will be reduced to minimum size necessary to conduct safe operations.

Cuts and fills will be reduced to 3:1 or shallower.

C. Reserve pits will be closed and backfilled as soon as the pit contents are dry enough to do so, or no later than the end of the next full summer following rig release, whichever comes first, to allow sufficient time for the pit contents to dry. Reserve pits remaining open after this period will require written authorization of the AO. Immediately upon well completion, any hydrocarbons or trash in the reserve and flare pits will be removed. Pits will be allowed to dry, be pumped dry, or solidified in-situ prior to backfilling.

D. Following completion activities, pit liners will be removed or removed to the solids level and disposed of at an approved landfill, or treated to prevent their reemergence to the surface and interference with long-term successful revegetation. The pit will not be trenched (cut) or filled (squeezed) while containing fluids. When dry, the pit will be backfilled with a minimum of five (5) feet of soil material. In relatively flat areas, the pit area will be slightly mounded to allow for settling and to promote surface drainage away from the backfilled pit.

E. The portions of the cleared well site not needed for operational and safety purposes will be re-contoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after re-contouring to allow for maximum interim reclamation.

F. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including road cuts and fills and to within a few feet of the production facilities, unless an all-weather, surfaced, access route or small "teardrop" turnaround is needed on the well pad.

G. Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of four to six inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown below) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut and fill slopes.

H. To help mitigate the contrast of recontoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, debris, and rock over recontoured cut and fill slopes.

I. A proposed seed mixture for this location is BLM Native Seed Mix #3.

J. Reclamation will be considered successful if the following criteria are met:

    a. 70% of pre-disturbance cover is attained

    b. 90% dominant species*

    c. Erosion features are equal to or less than the surrounding area

    * The vegetation will consist of species included in the seed mix and/or occurring in the surrounding natural vegetation.

K. To control drainage during interim reclamation some of the BMP's for this pad include maintaining a bar ditch around the perimeter of the reclaimed pad with check dams.

Final Reclamation (P & A – Removal of equipment)

A. Flowlines on location will be removed before site reclamation, and all flowlines between the well site and production facilities will remain in place and will be filled with water.

B. The pad will be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. Fencing will meet standards found on page 18 of the Gold Book, 4th Edition, or will be fenced with operational electric fencing.

C. Revegetation will be accomplished by planting mixed grasses as specified below. Revegetation is recommended for road area as well as around production site.

D. A proposed seed mixture for this location is BLM Native Seed Mix #3.

E. Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4" to 6" within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown above) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut and fill slopes.

F. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Resalvaged topsoil will be spread evenly over the entire disturbed site to ensure successful

revegetation. To help mitigate the contrast of recontoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, woody debris, and large rocks over recontoured cut and fill slopes.

G. At final reclamation all stormwater management BMP's for drainage, sediment, and erosion will be removed in order to return the site to its natural state. All sediment will be managed through revegetation practices (e.g. seeding on contour, crimping straw on contour and/or erosion control hydro-mulch, pocking, and topsoil distribution). Down-gradient wattles will remain until vegetation establishment meets minimum requirements. Any stormwater management features utilized for final reclamation will be removed prior to FAN approval.

No Action Alternative: The APD would be denied. Therefore, the well would not be drilled, the pad and access road would not be constructed, and the pipelines would not be installed.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD:
The 25-1-199 original location is an alternative that was considered, but is not being carried forward for detailed analysis because there were considerable cultural resource concerns brought to the operator's attention that were significant enough to warrant relocating the pad site to an alternate location, therefore this alternative is no longer considered to be a viable option.

The WRFO received the NOS for the initial location for pad 25-1-199 on 3/19/2010. The location of this well was 39.93977^{o} N Lat, 108.44457^{o} W Lon. in T1S, R99W, Section 25, NENE; and is reflected in the NOS retained in the well file.

An onsite inspection was performed for this location on 4/22/2010. BLM personnel that attended were NRS - Briana Potts, Hydrologist - Bob Lange, Wildlife Biologist - Lisa Belmonte, Botanist - Maggie Marston, Botany Seasonal - Jill Schulte, and Forester - Jim Michels.

Although this location appeared to hold no obvious significant resource concerns based upon the onsite inspection, after the White River Field Office received the cultural resource survey report it was apparent that the proposed location of the pad would infringe upon, and potentially have considerable effects on cultural resources near the pad. In order to avoid this cultural site, the operator had moved that pad approximately 463 ft to the northwest and subsequently submitted a revised APD for this location, filed under the same well name.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (White River ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

Standards for Public Land Health: In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental assessment (EA). These findings are located in specific elements listed below.

Cumulative Effects Analysis Assumptions: Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as "...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Table 2 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project the area considered was the Natural Resources Conservation Service (NRCS) 5th Level Watershed. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

Table 2. Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horse Gathers	X	X	X
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Wind Energy Met Towers			X
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Oil Shale	X	X	X
Seismic	X	X	X
Vegetation Treatments	X	X	X

Affected Resources:

The CEQ Regulations state that NEPA documents "must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 3 lists the resources considered and the determination as to whether they require additional analysis.

Table 3. Resources and Determination of Need for Further Analysis

Determination[1]	Resource	Rationale for Determination
Physical Resources		
PI	Air Quality	See discussion below.
PI	Geology and Minerals	See discussion below.
PI	Soil Resources*	See discussion below.
PI	Surface and Ground Water Quality*	See discussion below.
Biological Resources		
NP	Wetlands and Riparian Zones*	There are no riparian areas within the project vicinity. Corral Gulch (privately-owned) is the nearest system (approximately one mile from project area) which supports riparian vegetation (nearly all facultative species). The nearest BLM-administered lands which support riparian character are located along Yellow Creek, which is separated from the project area by nearly 10 valley miles.
PI	Vegetation*	See discussion below.
PI	Invasive, Non-native Species	See discussion below.
PI	Special Status Animal Species*	See discussion below.
NP	Special Status Plant Species*	There are no special status plant species concerns associated with the proposed action. The nearest population of occupied threatened plant species are more than 2 miles to north and will not be impacted by the proposed action. A BLM sensitive plant survey was completed in 2010 and no plants were found within 100 m of the project area.
PI	Migratory Birds	See discussion below.
NP	Aquatic Wildlife*	The nearest system which supports higher-order aquatic vertebrate populations is Yellow Creek which is separated from the project area by 11 valley miles.
PI	Terrestrial Wildlife*	See discussion below.
PI	Wild Horses	The proposed action is located within the Piceance-East Douglas Herd Management Area (HMA). More specifically the 84 Mesa area of the HMA considered a higher use area by the wild horses.

Determination[1]	Resource	Rationale for Determination
Heritage Resources and the Human Environment		
PI	Cultural Resources	See discussion below.
PI	Paleontological Resources	See discussion below.
NP	Native American Religious Concerns	See discussion below.
PI	Visual Resources	See discussion below.
PI	Hazardous or Solid Wastes	The proposed action will generate some regulated solid and/or hazardous wastes.
NI	Fire Management	The proposed action lies within the B6W fire management polygon which requires an aggressive full suppression initial response.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.
NP	Environmental Justice	According to the most recent Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
Resource Uses		
NI	Forest Management	The Proposed Action would remove only a few pinyon and juniper trees. The amount of removal is minimal and does not require a detailed analysis. Use any woody material for reclamation as wood chips to incorporate into the topsoil layer.
PI	Rangeland Management	See discussion below.
NI	Floodplains, Hydrology, and Water Rights	The proposed action does not include any surface disturbance in floodplains and proper construction and maintenances of roads and pads should limit impacts to stormwater and hydrology. Mesa Energy has listed the potential sources and volumes of freshwater needed to drill the well.
PI	Realty Authorizations	See discussion below.
NI	Recreation	The proposed action is not expected to negatively impact recreation in the project area.
PI	Access and Transportation	See discussion below.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
Special Designations		
NP	Areas of Critical Environmental Concern	There are no Areas of Critical Environmental Concern (ACEC) within the project area. The nearest ACEC is more than 2 miles to the north.
NP	Wilderness	There are no WSAs present in the area.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the WRFO.
NP	Scenic Byways	There are no Scenic Byways within the project area.

* NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.
* Public Land Health Standard

AIR QUALITY

Affected Environment: The Proposed Action is an attainment area for national and state air quality standards, based on a review of designated non-attainment areas for criteria pollutants, published by the Environmental Protection Agency (EPA 2011). The Proposed Action is located more than 10 miles from any special designation airshed or non-attainment area. Non-attainment areas are designated by U.S. Environmental Protection Agency (EPA) as having air pollution levels that persistently exceed the national ambient air quality (NAAQ) standards. Projects that could impact special designation areas and non-attainment areas may require special consideration from the air quality regulatory agencies of Colorado Department of Public Health and Environment (CDPHE) and the EPA. The closest special designation areas include Dinosaur National Monument which is located northwest of the project area (designated Class II airshed with Prevention of Significant Deterioration (PSD) with thresholds for sulfur oxides and visibility), and the Mount Zirkel and Flat Tops Wilderness Areas located to north and east of the Proposed Action (designated Class I areas). General conformity regulations require that federal activities do not cause or contribute to a new violation of NAAQ standards; that actions do not cause additional or worsen existing violations of the NAAQ standards; and that attainment of these standards is not delayed by federal actions in non-attainment areas.

The Proposed Action is in RBC; which along with Garfield County is called the two County area and is within the Western Counties Monitoring Region of Colorado. The 2010 CDPHE monitoring assessment for this area showed there were 11 particulate monitors in the western Counties region (APCD 2010). This regional assessment did not include two new BLM sponsored air quality monitoring sites established in 2010 located near Rangely and near Meeker. Local air quality parameters including particulates are being measured at monitoring sites located at Meeker, Rangely, Dinosaur and Ripple Creek Pass near the Flat Tops Wilderness Area. Ozone data have been collected in Meeker and Rangely since 2010 and at Colorado National Monument in Mesa County since 2007. To a limited extent ozone is measured at Dinosaur National Monument. The closest location for an Interagency Monitoring of Protected Visual Environments (IMPROVE) site is near the Flat Tops Wilderness, east of the Project Area. IMPROVE sites measure visibility impairment from air borne particles.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Construction of the proposed facilities would result in low and short-term impacts on air quality during construction, drilling, completion and, to a lesser extent, from vehicles and gas processing and compression facilities during the production phase. Increases in the following criteria pollutants would occur due to combustion of fossil fuels during construction activities: carbon monoxide, ozone (secondary pollutant formed photochemically from volatile organic compounds (VOCs) and nitrogen oxides (NOx)), nitrogen dioxide, and sulfur dioxide. Non-criteria pollutants (NAAQ standards have not been set for non-criteria pollutants) such as nitric oxide, air toxics (e.g. benzene), and total suspended particulates may also experience slight, temporary increases as a result of the Proposed Action.

Additional low, short-term impacts to air quality may occur due to venting or flaring of gas from the wells during completion activities and VOCs from pits and tanks during production activities. Venting and/or flaring of natural gas is typically done for short periods of time in order to determine potential production amounts and characterize the quality of the gas. VOCs including

hazardous air pollutants (HAPs) commonly associated with oil and gas production (benzene, toluene, ethylbenzene, xylene, and n-hexane) will be released during production activities from tanks, separation equipment, and due to transportation of natural gas, produced water and condensate by pipeline or trucks.

The majority of dust pollution in Colorado is from miscellaneous fugitive dust sources (CAQCC 2010). Soil disturbance resulting from construction, heavy equipment, and drill rigs are expected to cause increases in fugitive dust and inhalable particulate matter, specifically for particulate matter (PM) 10 microns (μm) or less in diameter (PM_{10}) and particles 2.5 μm or less in diameter ($PM_{2.5}$). During construction and drilling phases, dust production is likely, especially when conditions are dry and/or windy. Fugitive dust emissions due to construction and drilling would likely cause low, short-term impacts to local air quality, specifically visibility. Particulate matter can have human health effects and are the major contributors to visibility problems because of their ability to scatter or absorb light.

Topsoil removed during road construction would be redistributed and stabilized alongside the road once the wells go into interim reclamation, the pipelines should be in final reclamation and the pads should be recontoured and stabilized. As vegetation establishes in these reclaimed areas, dust production will occur only when vehicles travel on the access roads to service the wells. The increase in airborne particulate matter from this project and the other wells previously approved is not expected to exceed Colorado ambient air quality (CAAQ) or NAAQ standards on an hourly, 8 hour average or daily basis for PM_{10} or $PM_{2.5}$.

In summary, soil disturbance resulting from construction of pads and roads, pipeline construction, and drilling is expected to cause increases in fugitive dust and inhalable particulate matter in the project area and immediate vicinity, and may contribute to reductions in regional visibility. In addition, increases in the following criteria pollutants: carbon monoxide, VOCs, ozone, nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during exploration and production activities. Non-criteria pollutants such as carbon dioxide, methane and nitrous oxide which are considered greenhouse gasses (GHGs), air toxics (e.g. benzene), total suspended particulates (TSPs), and increased impacts to visibility and atmospheric deposition may also increase as a result of natural gas exploration and development activities (no national ambient air quality standards have been set for non-criteria pollutants). Even with these increased pollutants the Proposed Action is unlikely to result in an exceedance of NAAQ and CAAQ standards, and is likely to comply with applicable PSD increments and other significant impact thresholds.

Cumulative Effects: The Proposed Action is in RBC. Principal air pollution sources include emissions from motor vehicles, oil and gas development, coal-fired power plants, coal mines, sand and gravel operations, windblown dust, and wildfires and prescribed burns (CAQCC 2010). Facility emissions in the two-county area are dominated by emissions related to oil and gas exploration, processing, or transportation. Due to these emission sources in the Colorado River, White River and in the nearby Unita and Yampa River Basins, VOCs, nitrogen oxides, and dust (particulate matter) are likely to increase into the future. However, with the exception of ozone, overall air quality conditions in the White River Basin are likely to continue to be in attainment of NAAQ standards due to effective atmospheric dispersion and limited transport of

air pollutants from outside the area. Ozone levels are influenced by emissions in the White River Basin and from the nearby Unita and Yampa River basins. Data collected in Dinosaur, Meeker and Rangely have measured exceedance in standards for 1-hour and 8-hour values for ozone (120 ppb and 75 ppb, respectively). To date, these exceedances have not been persistent enough to result in a violation of NAAQ standards.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No impacts to air quality would result from the No Action Alternative.

Cumulative Effects: Impacts would be similar to those described for the action alternative.

Mitigation: The following mitigation should be added as conditions of approval (COAs):

1. The operator shall employ dust suppression techniques as outlined in the SUPO whenever there is a visible dust trail behind vehicles during the construction and drilling phases of the Proposed Action. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.

GEOLOGY AND MINERALS

Affected Environment: Surficial geology of the well location is the Uinta of the Green River Formation. Mesa's targeted zone is in the Mesaverde. During drilling potential water, oil shale, oil, gas, and coal resources will be encountered from the surface to the targeted zone. Fresh water aquifer zones that may be encountered during drilling are the Perched in the Uinta, the A-groove, B-groove, and dissolution surface in the Green River formation. These geologic zones along with upper portion of the Wasatch are known for difficulties in drilling and cementing. BDU 25-1-199 is located in the area identified in the White River ROD/RMP as available for multi-mineral leasing. This well is located in EnCana's Buckhorn Draw Federal Oil and Gas Exploratory Unit COC-73788X.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: There is potential for commingling of the aquifer zones, however, the cementing procedure of the Proposed Action isolates the formations and will prevent the migration of gas, water, and oil between formations including the oil shale zones. Conventional recovery of the coal is not considered feasible at the depths encountered in the wells.

Due to tight sands characteristics of the formation, development of this well would likely deplete 20 acres or less of the hydrocarbon resources in the targeted formation. Future development potential of the oil shale resources near the existing wells may be limited.

Cumulative Effects: Colorado Oil and Gas Conservation Commission (COGCC) database identifies two producing oil and gas well locations within a one mile radius of well pad BDU 25-1-196. An additional 98 wells for full development of the natural gas resource within this one mile radius would be required if bottom hole spacing of 20 acres is necessary for the recovery of

the natural gas resources. Full development of the natural gas resource could preclude the future recovery of oil shale and sodium resources until the existing natural gas resources are exhausted.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The natural gas resources in the targeted zones would not be developed at this time.

Cumulative Effects: There would be no contribution to conflicts between recovery of oil shale, sodium, and natural gas resources.

Mitigation: None.

SOIL RESOURCES

Affected Environment: The classifications of soils within 30 meters of the proposed surface disturbance that may be impacted by the Proposed Action are shown in Table 4. There are no fragile soils or lands prone to landslides on Federal lands that will be impacted by this project.

Table 4. Soil Classifications within 30 Meters of the Surface Disturbance Proposed and/or the Centerline of Roads and Pipelines

Soil Classification	Range Site Description	Potentially Impacted Acres
Renstac-Piceance complex, 2-30% slopes	PJ woodland/Rolling Loam	45
Yamac Loam, 2-15% slopes	Rolling Loam	5

The majority of the soils impacted by the project (90 percent), including the well pad site, are Rentsac-Piceance complex with pinyon-juniper (PJ) woodlands and rolling loam. Renstac-Piceance soils are shallow, well drained, and are formed by sandstone outcrops. Piceance soils are moderately deep and well drained and are also formed from sandstones. These soils have medium runoff characteristics and the hazard for water erosion is slight to high.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would directly disturb an estimated 11 acres including drilling/production facility pad, access road, pipelines and installation of stormwater management BMPs. Soils have medium runoff characteristics, but may have a high hazard for erosion in some locations. The road, pad, and pipeline will be on relatively flat to moderate ground and should not result in a high hazard for erosion. Impacts outside the maximum disturbance area are not expected in these soils with proper BMPs for stormwater, construction, reclamation, and the mitigation described below.

The SUPO item 9c indicates that up to six inches of topsoil will be removed. If not enough topsoil is removed for reclamation activities productivity of soils might be compromised. A minimum of 6 inches of topsoil should be removed in most locations. Although this depth may include some soils with characteristics that are not typically considered "topsoil" it typically has weather material and includes more organic material than subsoils and therefore is more valuable

for reclamation activities. Therefore taking a minimum of six inches of topsoil would likely preserve soils valuable in reclamation.

Direct impacts from the construction of the well pad, the access road, and pipeline installation would include compaction of soils, removal of vegetation, exposure of subsoil, mixing of soil horizons, loss of topsoil productivity, and an increase in the susceptibility of soils to wind and water erosion. Compaction due to construction activities would reduce aeration, permeability, and water-holding capacities of soils in some locations. An increase in surface runoff could be expected from compacted soils and these soils are likely to be less resilient to erosion from surface runoff after disturbance. Removal of vegetation exposes soils to erosion from rainfall, wind, and surface runoff. Exposure of subsoil and mixing of soil horizons can change the physical characteristics of subsoil and may reduce the productivity of these soils into the future. Loss of topsoil productivity can occur during storage due to nutrient loss through percolation of precipitation through the soils, physical loss, mixing of less productive soil layers during moving, and a loss of structure.

These direct impacts could result in increased indirect impacts to soils off the site such as increased runoff and erosion. Implementation of BMPs for stormwater, mitigation, and reclamation will reduce impacts from this project and should limit impacts to the disturbed areas. However, there is the potential for intense storm events and BMP failures resulting in erosion off the site. This is most likely to occur adjacent to the well pad on the north side near the drainage. Monitoring of areas around the pad as outlined in the stormwater management plan should identify any failure of BMPs or unanticipated erosion.

This project could result in contamination of surface and subsurface soils due to unintentional leaks or spills from pipelines, construction equipment, storage tanks, and/or production equipment; if these spills were to occur they would affect the productivity of soils. Earthen berms are proposed for secondary containment of tank batteries. Without a liner these secondary containments may fail and result in releases of hydrocarbons into the soils in the advent of a leak or spill from the tanks.

Cumulative Effects: The Proposed Action is in RBC; principal impacts to soils are oil and gas development, oil shale research and development, natural gas processing and nacholite mining. Oil and gas development with well pads in the general area are likely to occur at about a 2-3 well pads per square mile and will include surface disturbance and reclamation of other well pads, pipelines, roads, and support facilities. Livestock grazing occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some areas. In general, soil disturbance that would result from the Proposed Action and other activities are likely to reduce soil productivity and may lead to increased erosion and instability of soils in local areas.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No impacts to soils would occur.

Cumulative Effects: Impacts would be similar to those described for the action alternative.

Mitigation:

1. A minimum of six inches of topsoil will be salvaged and stored undisturbed, seeded, and covered with erosion fabric to preserve the soil characteristics for interim reclamation.

2. Mesa Energy will line the secondary containment for the tank batteries with a 24 mil liner in order to protect soils from tank and offloading leaks and spills.

3. All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of three inches unless there are safety concerns or activities otherwise approved by the Authorized Officer (AO).

4. If erosion features such as rilling, gullying, piping, and mass wasting occur at any time in the future on disturbed surfaces, the erosion features will be addressed immediately after observation by contacting the AO and submitting and implementing a plan to assure successful soil stabilization with BMPs to address the erosion problems.

Finding on the Public Land Health Standard #1 for Upland Soils: With mitigation, this action is unlikely to reduce the productivity of soils on public lands.

SURFACE & GROUND WATER QUALITY

Affected Environment: Surface Water: This project is in the headwaters of Yellow Creek. Table 5 describes water segments that may be impacted by this project.

Table 5. Water Quality Classification Table*

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
13b	All tributaries to Yellow Creek from the confluence with Piceance Creek to Douglas Creek.	Yes	Warm 2	Not Primary Contact Recreation	Yes	No

* Colorado Department Of Public Health And Environment, Water Quality Control Commission, Regulation No. 37 Classifications and Numeric Standards For Lower Colorado River Basin, Effective June 30, 2011

Segment 13b is protected for warm water aquatic life (Warm 2). The warm designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperatures frequently exceeds 20 °C. The Warm 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of warm water biota. These segments are also protected for recreation and agricultural use.

Groundwater: Precipitation in this area generally moves from areas of recharge to surface waters via alluvial aquifers and on the surface during spring melt and rain storms. A substantial portion

of annual precipitation infiltrates to deeper bedrock aquifers that contribute to contact springs. Springs and ground water inputs generally occur in both bedrock and alluvial aquifers along valley bottoms.

Contact springs are common in the area and are often the result of upper bedrock aquifers consisting of fractured, lean oil shale zones, and siltstones of the Green River Formation above and below the Mahogany Zone or from fractured marlstone and sandstones of the saturated portions of the overlying Uinta Formation. Perched groundwater zones occur locally within the Uinta Formation when these saturated zones contact the surface. These perched zones can occur in the ridges between surface water drainages and may be manifested as springs and seeps above the valley floor in outcrop areas.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Surface Waters: Clearing, grading, and soil stockpiling activities associated with the Proposed Action would alter overland flow and natural infiltration patterns. Potential direct impacts include surface soil compaction caused by construction equipment and vehicles, removal of vegetation, and disturbance of surface soils, which would increase rainsplash erosion and reduce the soil's ability to absorb water and increase the volume and rate of surface runoff, which in turn would increase surface erosion. Steep-sloped hillsides adjacent and along the road route are the most likely area for this surface erosion to occur. Stormwater measures and BMPs including periodic monitoring of any erosion problems would be essential to avoid erosion and increased sedimentation to surface waters.

Surface runoff associated with storm events may increase sediment/salt loads in surface waters down gradient of disturbed areas. Sediment can be deposited and stored in minor drainages where it would be moved into Yellow Creek during heavy convection storms. Surface erosion for this project is most likely during the construction and early production phases of the project and would be mitigated using BMPs for stormwater.

Groundwaters: Three zones of potential water (Unita, A-groove and the B-groove) are anticipated to be drilled through; the deepest of these zones is estimated at 1,290 feet below the surface. These zones would be protected by installing a surface casing to a depth of approximately 2,500 feet and cementing behind this casing to the surface.

If drilling additives such as diesel fuel are used during drilling of the surface casing and drilling fluids are lost to groundwater aquifers, aquifers may be contaminated. Using bentonite, freshwater, and other additives that cannot contaminate groundwater mitigates the loss of drilling fluids that can be common during drilling since the introduction of these substances would not impact the quality of these groundwater features.

Impacts to groundwater resources could occur due to failure of well integrity, failed cement, surface spills, and/or the loss of drilling, completion, and hydraulic fracturing fluids into groundwater. Types of chemical additives used in drilling activities may include acids, hydrocarbons, thickening agents, lubricants, and other additives that are operator and location specific. Concentrations of these additives also vary considerably and are not always known since different mixtures can be used for different purposes in gas development and even in the

same well bore. Loss of drilling fluids may occur at any time in the drilling process due to changes in porosity or other properties of the rock being drilled through for both the surface casing and the production hole. When this occurs, drilling fluids may be introduced into the surrounding formations which could include freshwater aquifers, if it occurs when drilling the surface or conductor casing.

Hydraulic fracturing is designed to change the producing formations' physical properties by increasing the flow of water and gas around the well bore. Hydraulic fracturing may also introduce chemical additives into the producing formations. Chemical additives used in completion activities for the well will be introduced into the producing formations, but should mostly be pumped back out before production. The production zones are between 6,400 to 10,240 feet below the surface. The production zones do not contain freshwater.

Known groundwater bearing zones in the project area would be protected by implementing the drilling plan as described. Groundwater resources (including the contact springs, perched aquifers, and groundwater zones described in the Affected Environment) are all in elevations above the surface casing. With proper drilling and completion practices contamination of groundwater resources is unlikely.

Cumulative Effects: Well pads in the general area are likely to occur at about two to three well pads per square mile and will include surface disturbance and reclamation of other well pads, pipelines, roads, and support facilities. Groundwater may be influenced by nacholite mining and oil shale research. Livestock and wildhorse grazing occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some areas. No other impacts other than oil and gas development and grazing are expected in the Yellow Creek watershed. In general, the Proposed Action and other activities could increase sedimentation, but it is unlikely that water quality would be impacted in Yellow Creek.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Neither ground nor surface water quality would be impacted by the no action alternative.

Cumulative Effects: Impacts would be similar to those described for the action alternative, but would not include the impacts from the Proposed Action.

Mitigation:

1. To protect surface waters below the project area, keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.

2. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of

harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

Finding on the Public Land Health Standard #5 for Water Quality: It is unlikely that construction of the well pad, the access roads and installation of the pipeline would result in an exceedence of state water quality standards.

VEGETATION

Affected Environment: The proposed well pad, access road and pipeline are located within a PJ/rolling loam ecological site. Vegetation cover within the project area is comprised primarily of pinyon (*Pinus edulis*), Utah juniper (*Juniperus osteosperma*), and Wyoming big sagebrush (*Artemesia tridentate*). Understory vegetation consists primarily of perennial grasses including: slender wheatgrass (*Agropyron trachycaulum*), crested wheatgrass (*Agropyron cristatum*), Indian ricegrass (*Achnatherum hymenoides*), bluebunch wheatgrass (*Agropyron spicatum*), Junegrass (*Koeleria cristata*), and western wheatgrass (*Agropyron smithii*). The proposed pipeline will follow an abandoned airstrip which has previously been disturbed and reclaimed.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The proposed project would disturb approximately 11 acres, approximately 2.34 acres occur within the previously disturbed airstrip. The principal impact to vegetation would be complete removal of vegetation for construction of the well pad, access road and pipeline, and the earthen disturbance associated with removing vegetation. In terms of plant community composition, structure, and function, the principal impact over the long term would occur if cheatgrass or noxious weeds are allowed to establish and proliferate on the disturbed areas associated with well pad and access road construction. If revegetation is prompt and effective, there likely would be no long term impact to vegetation communities within the project area. The applicant has proposed to use BLM native seed mix #3, this seed mix is appropriate for the ecological sites in which the Proposed Action occurs.

Cumulative Effects: The Proposed Action would not add substantially to current or future disturbances within the project area. This project area currently has healthy and diverse plant community composition; therefore the removal of 11 acres of big sagebrush and PJ vegetation is not expected to have any measurable influence on the overall plant community.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no action authorized that could influence the upland vegetation on these sites.

Cumulative Effects: There would be no additional contribution to previous, existing, or future disturbances under this alternative.

Mitigation:

1. In addition to the design features submitted by the applicant in the SUPO, the applicant shall use seed that is certified and free of noxious weeds. All seed tags will be submitted to the *designated Natural Resource Specialist* within 14 calendar days from the time the seeding activities have ended via SN. The SN will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Upland plant communities in the project area currently meet the Standard and are expected to meet the Standard in the future following project implementation and successful reclamation of disturbed areas, as described in the SUPO which has been incorporated in to the Proposed Action of this document.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The invasive annual cheatgrass (*Bromus tectorum*) is known to occur within the location of disturbance associated with the Proposed Action, primarily in areas of unrevegetated earthen disturbance in association with roads, pipelines, and well locations. Houndstounge (*Cynoglossum officinale*) is known to occur within the area of the Proposed Action.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would create about 11 acres of new earthen disturbance; which if not revegetated with desirable species and /or treated with herbicides to eradicate invasive, non-native species, would likely be invaded and dominated by undesirable species, increasing the potential for fire and the consequent further proliferation of cheatgrass. Noxious weeds could also spread from the project sites to surrounding native rangelands resulting in a long term negative impact. The resulting increase of noxious weeds/cheatgrass could perpetuate a downward cycle of environmental degradation that would be largely irreversible. There would be a low likelihood of long term negative impacts if the design features submitted by the applicant in the SUPO are followed.

Cumulative Effects: The Proposed Action would contribute to incremental fragmentation of native plant communities, which puts these areas at greater risk for establishment and spread of noxious and invasive weed species. If noxious weeds establish in these plant communities the health of the upland plant communities and the associated ecological function would decline.

With timely and successful reclamation the risk of weed establishment and the effects of fragmentation would be minimized.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no action authorized that would influence the native vegetation of this area.

Cumulative Effects: There would be no additional contribution to previous, existing, or future disturbances under this alternative.

Mitigation: None beyond the design features submitted by the applicant in the SUPO.

SPECIAL STATUS ANIMAL SPECIES

Affected Environment: There are no threatened or endangered animal species that are known to inhabit or derive important use from the project area. The White River below Rio Blanco Lake is designated critical habitat for Colorado pikeminnow populations that are currently confined to the river below Taylor Draw dam. The Proposed Action is separated from the White River's critical habitat by roughly one mile of ephemeral channel and 20 valley miles of Yellow Creek, and from occupied pikeminnow habitat by an additional 26 miles of river. The endangered bonytail, humpback chub, and razorback sucker do not occur in Colorado portions of the White River, but water depletions in the White River system may affect downstream habitats occupied by these species in the Green River.

The Wyoming big sagebrush habitats that encompass the project area provide habitat for Brewer's sparrow, a BLM sensitive species and one listed by the U.S. Fish and Wildlife Service (FWS) as a Bird of Conservation Concern (BOCC). Brewer's sparrows are common and widely distributed in virtually all big sagebrush, greasewood, saltbush, and mixed brush communities throughout the Resource Area. These birds are typically one of the most common members of these avian communities and breeding densities generally range between 10-40 pairs per 100 acres. Although most abundant in extensive stands of sagebrush, the birds appear regularly in small (one to two acre) sagebrush parks scattered among area woodlands. Typical of most migratory passerines in this area, nesting activities normally take place between mid-May and mid-July.

There are no mature woodland habitats in the vicinity of the project area that would support nesting functions for northern goshawk or provide roost substrate for BLM sensitive bat species.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, as well as downstream populations of humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities associated

with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time funding contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-feet depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. The Proposed Action is covered by this agreement and water-use figures associated with this project would be entered into the White River Field Office fluid minerals water depletion log that will be submitted to the Colorado State Office at the end of the Fiscal Year.

Discussions in *Migratory Bird* section regarding direct and indirect impacts of the Proposed Action are directly applicable to Brewer's sparrow.

Cumulative Effects: Cumulative effects would be similar to those discussed in the *Migratory Bird and Terrestrial Wildlife* sections.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to special status animal species or important habitats under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact special status animal species or important habitats under the No Action Alternative.

Mitigation: See mitigation in *Migratory Bird* section.

Finding on the Public Land Health Standard #4 for Special Status Species: The Land Health Standards for special status animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from continued meeting of these standards.

MIGRATORY BIRDS

Affected Environment: The proposed well pad and a large portion of pipeline lie adjacent to RBC Road 24X, a well maintained and well-traveled gravel road. A spur segment of the pipeline lies within the disturbance of an abandoned air strip. The project area is largely encompassed by Wyoming big sagebrush communities with an herbaceous understory heavily dominated by Kentucky bluegrass and cheatgrass. Vegetation within the abandoned air strip is largely comprised of nonnative crested wheat grass. Open canopied PJ woodlands are the

dominant vegetation type on the adjacent slopes and ridge tops. The surrounding communities provide suitable nesting habitat for many species of migratory birds during the breeding season (typically May 15 – July 15) including but not limited to: blue-gray gnatcatcher, green-tailed towhee, Vesper's sparrow, meadowlark (sagebrush shrubland associates) and Bewick's wren, black-throated gray warbler, dusky flycatcher and gray flycatcher (PJ associates) The only Birds of Conservation Concern (BOCC; designated regionally by the US Fish and Wildlife Service (USFWS) for long-term declining population trends) within the project area are Brewer's sparrow (see discussion in *Special Status Animal Species* section) and juniper titmouse.

Although these locations have no open water or wetland areas that support or attract waterfowl use, the development of reserve pits that contain drilling fluids have attracted waterfowl use, at least during the migratory period (i.e., local records: mid-March through late May; mid-October through late November)

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Pad construction would result in the direct removal of roughly six acres of sagebrush habitat, which under natural succession regimes could take 20 to 30 years to return to preconstruction conditions. Pipeline installation would involve removal of approximately five acres of sagebrush/grassland or previously disturbed/reclaimed (namely nonnative perennial species such as crested wheatgrass) communities.

Impacts to migratory birds would vary depending on construction and drilling timeframes. Activities (e.g., pad construction, drilling, pipeline installation etc.) taking place outside the migratory bird breeding window (approximately May – July) would have virtually no impact on nesting activities/outcomes but may indirectly influence birds (see discussion below). Should activities take place during all or portions of the breeding season, there would be greater potential for displacement or nest abandonment and possible nestling mortality. Indirectly the Proposed Action could impact an additional five acres of functional forage and nesting habitat due to reductions in nest densities and avoidance of habitats associated with increased human activity. Because the proposed pad and pipeline corridor lie adjacent to RBC 24X it is suspected that nest densities are likely suppressed to a certain degree. Based on breeding bird densities in the Resource Area, the Proposed Action may potentially impact up to 3-4 nesting pair. Overall nest disruption (associated with the Proposed Action) to local bird populations is expected to be minimal. It should be noted that reclamation efforts, if successful, would likely provide a healthier, more diverse forage and cover base than current conditions (particularly along the air strip).

The proposed pad location and the portion of the pipeline that parallels RBC Road 24X are located along a BLM established breeding bird survey route. Surveys are conducted through visual, but predominately aural observations. Noise associated with construction activities would make it extremely difficult for surveyors to detect the presence of bird species in the immediate vicinity. In addition, construction activities would likely deter birds from advertising territories and/or nesting in suitable adjacent habitats which may bias data collected during the 2012 breeding season.

It has been brought to BLM's attention that in certain situations migratory waterfowl have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

Cumulative Effects: The Proposed Action is not expected to add substantially to existing or proposed disturbances in the area. The removal of 11 (five of which would be short-term) acres of predominately disturbed/reclaimed habitat and/or habitats immediately adjacent to well-traveled roadways is not anticipated to have a measurable influence on local bird populations as these areas typically provide limited forage and cover resources. Prompt and effective reclamation would promote a healthier, diverse plant community (particularly along the abandoned air strip) which may potentially benefit local wildlife populations as a whole.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to migratory birds or important nesting/foraging habitat under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact terrestrial wildlife species or habitats under the No Action Alternative.

Mitigation:

1. Pad and pipeline construction will be completed prior to May 15 or after June 15 to avoid conflict with BLM migratory bird breeding survey. Mesa will contact BLM biologists immediately if construction plans change.

2. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds, and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

TERRESTRIAL WILDLIFE

Affected Environment: The lower elevation Wyoming big sagebrush parks and open canopy PJ dominated ridges are categorized by Colorado Parks and Wildlife as mule deer general winter range. These ranges typically receive heaviest use from October through April.

In general, the project area lacks suitable nesting substrate (mature woodlands and/or rock outcrops) for woodland raptors. The nearest known nest structure is nearly one mile from the project area.

The distribution and abundance of small mammal populations are poorly documented within the Resource Area. Recent trapping efforts undertaken throughout Piceance Basin indicate a high tendency in both sagebrush and PJ communities for more generalized species such as deer mouse and least chipmunk, and it is suspected that these species would be relatively abundant in the project area. There are no small mammal species that are narrowly endemic or highly specialized species known to inhabit the project area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Construction of the proposed well pad would involve the direct removal of nearly six acres of predominately sagebrush habitat. Under natural succession regimes these communities would be expected to return to preconstruction conditions in roughly 20-30 years. The eastern edge of the pad would abut RBC road 24X, a well-traveled and well maintained gravel road. Installation of the proposed pipelines would result in the short-term removal of approximately five acres of sagebrush/grassland habitats lying adjacent to CR 24X or previously disturbed/reclaimed vegetation along an existing abandoned air strip. It is unlikely that these areas currently provide much in the way of forage or cover resources for local wildlife populations due to the proximity to the existing road and patchy vegetative cover (abandoned air strip). Prompt and effective reclamation along the pipeline corridors, particularly the air strip where vegetative cover is limited to introduced species such as crested wheat grass, may potentially benefit local wildlife populations (most likely small mammal species). Big game may benefit to a certain degree, but due to the proximity of the pipeline to an existing road, traffic levels may dictate the amount of use.

Cumulative Effects: Cumulative impacts addressed in Migratory Bird section would be directly applicable to terrestrial wildlife.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to terrestrial wildlife species or important habitats under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact terrestrial wildlife species or habitats under the No Action Alternative.

Mitigation: See reclamation provisions in *Vegetation* section.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: The Land Health Standards for animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from the continued meeting of the Land Health Standards.

WILD HORSES

Affected Environment: The proposed action is located in the Piceance-East Douglas Herd Management Area (HMA) which covers approximately 190,130 acres of public and private lands. The Proposed Action would result in the removal of approximately 10.6 acres of land area for the wild horse herd within the HMA. The primary impact would be removal of existing vegetation and loss of forage and cover. The loss of 10.6 acres within the HMA would be approximately 0.00005 percent of the whole HMA.

The WRFO manages this herd in a manner designed to ensure a healthy, viable breeding population. The appropriate management level (AML) is between 135 to 235 wild horses. To maintain the AML the WRFO occasionally gathers wild horses and removes some from the range. The Proposed Action is located within the Yellow Creek grazing allotment of the HMA and more specifically in the area locally known as 84 Mesa. This area is dominated by mixed-age PJ woodlands with pockets of sagebrush and the open bench associated with the top of the mesa (84 Mesa) dominated by forb and grass communities. The woodlands provide cover for the wild horses while the sagebrush and associated forb/grass communities provide forage. This area is generally considered a year round high use area by the wild horses; however, during the hotter summer/fall months of the year, several bands may migrate to the south or other areas with higher elevations for vegetation as well as the ability to get away from insects such as gnats.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Implementation of the Proposed Action would result in a loss of vegetation available to grazing animals, of approximately one (1) Animal Unit Month (AUM) of forage. Generally, the impacts to the vegetation would be expected to be long-term until complete reclamation of the project area is achieved. Construction activities associated with this project may cause short-term displacement of wild horses from the immediate area due to human activity, equipment operation, noise, and dust; however, it is believed they will make effort to avoid the area during construction but will return when the activities are reduced. Due to nearby county roads and other existing energy development activities, wild horses in the area are likely to be habituated to human activity to some degree. Implementation of the Proposed Action could result in impacts to wild horses. Wild horses that do not avoid activities could have an increased potential for injuries (e.g. hooves and legs caught in or through equipment, fencing, cattleguard, or brace assembly). There is also potential for wild horses to be become trapped should they fall into an open trench or hole. Increase in traffic on access roads in the area could also increase the potential for harassment of and vehicle collisions with wild horses, as well as result in young foals becoming dislocated from their mare and/or band.

Cumulative Effects: Implementation of the Proposed Action in combination with existing and future activities is not likely to affect the stability of the wild horse herd within the HMA. The proposed well would occur alongside other energy development activities within the HMA. Wild horses continue, at a high rate, to utilize the habitat with regular frequency. Band numbers and sizes continue to do well. Successful and complete reclamation following

disturbance will aid in maintenance of sustainable vegetation communities that are utilized by grazing animals.

Environmental Consequences of the No Action Alternative:
Direct and Indirect Effects: There will be no change from the present situation. There would be no new impacts to the HMA or the wild horse herd under the No Action Alternative.

Cumulative Effects: There would be no activities which would contribute to the loss of the wild horses in this portion of the HMA.

Mitigation:

1. During the foaling period, March 1 to June 15, if BLM determines wild horses are in the vicinity of the proposed project, the project activities may be delayed for a specific 60-day period from within the window of March 1 to June 15, as outlined by the White River ROD/RMP, to reduce impacts during this sensitive time period.

2. Should the proposed action occur simultaneous with a wild horse gather, all project-related traffic would need to be coordinated with the BLM and the contractor for the gather operation.

3. To minimize the incidents of young foals becoming dislocated from their dam (mare), crews would be required to slow or stop when wild horses are encountered, allowing the bands to move away at a pace slow enough so that foals can keep pace and are not separated.

4. All installed cattleguards associated with the project will be upgraded to a horse proof cattleguard so that the risk of wild horses becoming trapped in them is reduced.

CULTURAL RESOURCES

Affected Environment: The proposed well pad location has been inventoried at the Class III (100% pedestrian) level (Conner et. al. 2006 Compliance Dated 9/18/2003, Conner and Darnell 2010 Compliance dated 10/4/2010). Inventory of the well pad location identified four isolated finds which are not considered National Register of Historic Places (NRHP) eligible and will not be discussed further here.

One site, 5RB.6013, was identified during the inventory and is considered eligible for nomination to the NRHP. As originally planned the well pad would have directly impacted the site. The well pad was moved north and west to avoid the site; however, the sites is still very close to the new well pad location and could be impacted by development activity. Mesa has agreed to protect the site and its integrity during the life of the well pad.

The proposed pipeline route will occur within existing disturbance. Portions of the line are along County Road 24X in existing disturbance and would not impact any known cultural resources.

The remainder of the pipeline would be routed from County Road 24x to the old C-A Oil Shale airstrip then follow the airstrip to tie in at the Barcus Creek Pipeline; the pipeline would be placed in previously existing disturbance. The Barcus Creek Pipeline has also been inventoried to an adequate level (Conner and Davenport 2007 Compliance Dated 7/18/2007).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Because Mesa will take measures to protect site 5RB.6013 such as restricting staff to the well pad area during work hours, monitoring of the site during construction, fencing and monitoring the site as an environmental study area, or other measures to protect the sites' integrity, there should be no impacts to cultural resources.

Because the proposed pipelines are routed to follow County Road 24x to the old C-A Oil Shale airstrip then follow the airstrip to the tie in to the Barcus Creek Pipeline there would be no anticipated impacts to any cultural resources.

Cumulative Effects: If any of the identified resources are in any way impacted by development there will be a net, irreversible and irretrievable loss of scientific data to the regional archaeological database.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no new impacts to cultural resources under the No Action Alternative.

Mitigation:

1. Mesa is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. Mesa will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. Mesa, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.

2. Mesa Energy Partners, L.L.C (Mesa) assumes responsibility for the integrity of site 5RB.6013 for the duration of the life or operation of Buckhorn Draw Unit 25-1-199 well. This includes, but may not be limited to, the yearly monitoring of site 5RB.6013 through an approved archaeological consultant. It shall also include any stabilization or data recovery, through an approved archaeological consultant, necessitated by site degradation, whether resulting from construction and operation of features on the Buckhorn Draw Unit 25-1-199 well, vandalism, erosion, or any other cause. *See* Beartooth Oil & Gas Co. (January, 1985; 85 IBLA 11).

3. Pursuant to 43 CFR 10.4(g), Mesa must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), Mesa must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

PALEONTOLOGICAL RESOURCES

Affected Environment: The proposed well pad location and related pipelines are located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO has classified as a PFYC 4/5 formation meaning it is known to produce scientifically noteworthy fossil resources (c.f. Armstrong and Wolny 1989).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: If it becomes necessary to excavate into the underlying sedimentary rock formation to level the well pad, excavate the reserve/cuttings/blooie pit, or bury any of the well tie pipelines there is a potential to impact scientifically noteworthy or important fossil resources. Fossils are not uniformly distributed through the formation and it is impossible to know if fossils will be impacted prior to construction.

Cumulative Effects: Any excavations into the underlying sedimentary rock formations have a high potential to adversely impact paleontological resources. Any such impacts are a permanent, irreversible, irretrievable loss to the regional scientific database.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no new impacts to paleontological resources under the No Action Alternative.

Mitigation:

1. If any paleontological resources are discovered as a result of operations under this authorization, Mesa or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove

the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

2. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock.
3. Mesa is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands. If any paleontological resources are discovered as a result of operations under this authorization, Mesa must immediately contact the appropriate BLM representative.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: No Native American Religious Concerns are known in the area, and none have been noted by Northern Ute tribal authorities.

Mitigation:

1. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.

VISUAL RESOURCES

Affected Environment: The Proposed Action is located within a Visual Resource Management (VRM) Class III area. The objective of the VRM Class III area is to partially retain the existing character of the landscape. The casual observer traveling through the area may be briefly attracted to the activities but this will not dominate the view. The area is currently being developed for fluid minerals.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The well is located to not be easily visible to the casual observer traveling CR 24X, 20, or 91. The general public likely to be using the area are hunters (confined mainly to the fall and winter months) and/or oil and gas field employees. These groups generally travel main county roads and/or other available routes open to the public. The pipeline will be visible to the casual observer traveling CR 24X, as the pipeline lies adjacent to the road. The pipeline will be visible until revegetation is successful. By painting all above ground facilities juniper green to mimic the surrounding vegetation, the level of change to the characteristic landscape would be less than moderate and the objectives of the VRM III classification would be retained.

Cumulative Effects: Combined with other similar oil and gas development activities in the area, this project will cumulatively contribute to a somewhat industrial appearance on the landscape; however, these effects can be mitigated with approved paint colors that will help the facilities blend with the surrounding landscape.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects:

There would be no activities that will attract the attention of the casual observer.

Cumulative Effects: None.

Mitigation:

1. All permanent (onsite for six months or longer) structures, facilities, and equipment placed onsite shall be painted and maintained using the BLM Standards Environmental Color Chart Juniper Green within six months of installation.

HAZARDOUS OR SOLID WASTES

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored, or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The proposed activities may use regulated materials and will generate some solid and sanitary wastes. The potential for harm to human health or the environment is presented by the risks associated with spills of fuel, oil and/or hazardous substances used during oil and gas operations. Other accidents and mechanical breakdowns of machinery are also possible. Substances used in the hydraulic fracturing process may be harmful to human health or the environment. However, freshwater-bearing formations and other resources suitable for human use or consumption are isolated from man-made materials used in oil and gas operations through the use and cementing of surface casing, see 43 CFR §3162.5-2(d).

Cumulative Effects: The risk of harm to human health and the environment resulting from oil and gas operations would increase proportionally with the addition of each well.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the No-Action alternative.

Direct and Indirect Effects: There would be no risk of harm posed to human health and the environment if the Proposed Action is not implemented.

Cumulative Effects: The risk of harm to human health and the environment resulting from oil and gas operations would not change from current conditions if the Proposed Action is not implemented.

Mitigation:

1. All lessees and/or operators and right-of-way holders shall comply with all federal, state and/or local laws, rules, and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.

2. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.

3. Through all phases of oil and gas exploration, development, and production, all lessees and/or operators and holders of rights-of-way shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing: a) emissions, b) fresh water use, and c) utilization, production, and release of hazardous material.

4. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

5. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

6. As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.

7. As a reasonable and prudent lessees/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground), and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to

clean-up and test air, water (surface and/or ground), and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

8. With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the right-of-way holder and the lessee/operator, and through the right-of-way holder and lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

RANGELAND MANAGEMENT

Affected Environment: The proposed well pads and access routes are located within the Barcus/Pinto pasture of the Yellow Creek grazing allotment (06030). Authorized livestock use (See Table 6) within this pasture occurs during spring, and fall/winter as shown in the table below.

Table 6. Authorized Livestock Use

Authorized use Within the Barcus-Pinto Pasture (06030)						
	Livestock		Grazing Period			Authorized Use
Pasture	Number	Kind	Begin	End	%Public Land	(AUMs)
Barcus-Pinto	240	*C	5/1	5/15	100	118
Barcus-Pinto	340	C	5/16	6/30	100	514
Barcus-Pinto	340	C	10/16	12/30	100	850

*Cattle

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would result in a short-term loss of less than two Animal Unit Months (AUMs) of livestock forage. This initial loss of forage would be considered short term; if revegetation is prompt and effective there would be no net loss of livestock forage over the long term. Following successful revegetation of disturbance associated with the well pad, road, and pipeline construction, it is expected that forage available to livestock would increase slightly due to conversion of this area from a shrub dominated site to a grass/forb site which would potentially have a higher forage production value for grazing animals. As the project is proposed, no rangeland improvement projects would be directly affected.

Cumulative Effects: Implementation of the Proposed Action in conjunction with existing and future uses is not expected to impede or affect the proper management of livestock on rangelands within the grazing allotment in which the Proposed Action occurs.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no change from the present situation.

Cumulative Effects: There would be no vegetation disturbing activities which would contribute to short term reduction of forage within the project area. There would be no potential for damage to range improvement projects as a result of the proposed project.

Mitigation:

1. Any range improvement projects such as fences, water developments, or other livestock handling/distribution facilities that are damaged or destroyed as a direct or indirect result of implementation of the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.

REALTY AUTHORIZATIONS

Affected Environment: The off-unit portion of the natural gas pipeline and water line will require rights-of-way (ROWs). The off-unit portion of the temporary work areas will require a temporary use permit (TUP). There are existing ROWs for natural gas pipelines and water lines authorized to Bargath, LLC. Road ROWs are authorized to RBC (ROW COC23560 for RBC Road 24X) and BLM.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Pipeline ROW COC75212 would be 770 feet long, 25 feet wide, and contain approximately 0.44 acres. Water line ROW COC75213 would be constructed within the associated pipeline ROW and would be 770 feet long, 15 feet wide, and contain approximately 0.27 acres. TUP COC75212-01 would be 770 feet long, 25 feet wide, and contain approximately 0.44 acres. Construction of the proposed pipeline trench has potential to intersect ROWs held by other parties, such as access roads, water lines, pipelines, and county roads. Damage to the facilities or rights of existing ROW holders could occur if construction activities are not properly planned and other ROW facilities are not properly identified prior to construction. Damage to county roads from trenching and heavy equipment use may also occur. If accurate "as built" mapping is not provided to BLM, conflicts may develop in the future with other ROW holders.

Cumulative Effects: As the number of ROW holders in the project area increases so would competition for suitable locations for facilities. Increased ROW densities would also lead to a higher probability of conflict between ROW users.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: ROWs would not be issued for a natural gas pipeline and water line.

Cumulative Effects: None.

Mitigation:

1. All activities would be required to comply with all applicable local, state, and federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and RBC permits, implementing all applicable mitigation

measures required by each permit, and effectively coordinating with existing facility ROW holders.

2. The holder shall provide the BLM AO with data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS) to accurately locate and identify the ROW and all constructed infrastructure (as-built maps) within 60 days of construction completion.

   Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or at last resort, (3) AutoCAD .dwg or .dxf files. Option 2 is highly preferred. In ALL cases the data must be submitted in Universal Transverse Mercator (UTM) Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only) or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the Content Standards for Digital Geospatial Metadata from the Federal Geographic Data Committee standards. Questions should be directed to WRFO BLM GIS staff at (970) 878-3800.

3. RBC Road & Bridge Department shall be contacted and any permits obtained prior to any construction activity adjacent to or within the ROW for County Road 24X.

4. Construction activity should take place entirely within the areas authorized in the ROW grants and temporary use permit.

ACCESS AND TRANSPORTATION

Affected Environment:
The primary access into the well site is CR 24 and 24X. CR 24 and 24X are dirt roads that are frequently used to access the Piceance Basin from Rangely. This route experiences minimal traffic mainly associated with recreationist (hunters) and oil and gas field workers (accessing wells).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: With an increase of vehicular traffic on CR 24, 24X and other local roadways due to construction and well drilling activities, it is likely that utilized road surfaces will deteriorate over time. Fugitive dust on dirt surfaced roads may linger above the surface reducing visibility and creating a hazard. This hazard is increased on naturally surfaced roads due to the breakdown of the soils.

Cumulative Effects: This project, combined with other oil and gas development activities in the area, will cumulatively contribute to degraded road surfaces, increases in fugitive dust and an increase in heavy truck traffic.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Traffic levels and road conditions would remain as they are under the No Action Alternative.

Cumulative Effects: None.

Mitigation:

1. A BLM approved dust suppressant will be applied to road surfaces as necessary to reduce the fugitive dust to improve travel route safety.

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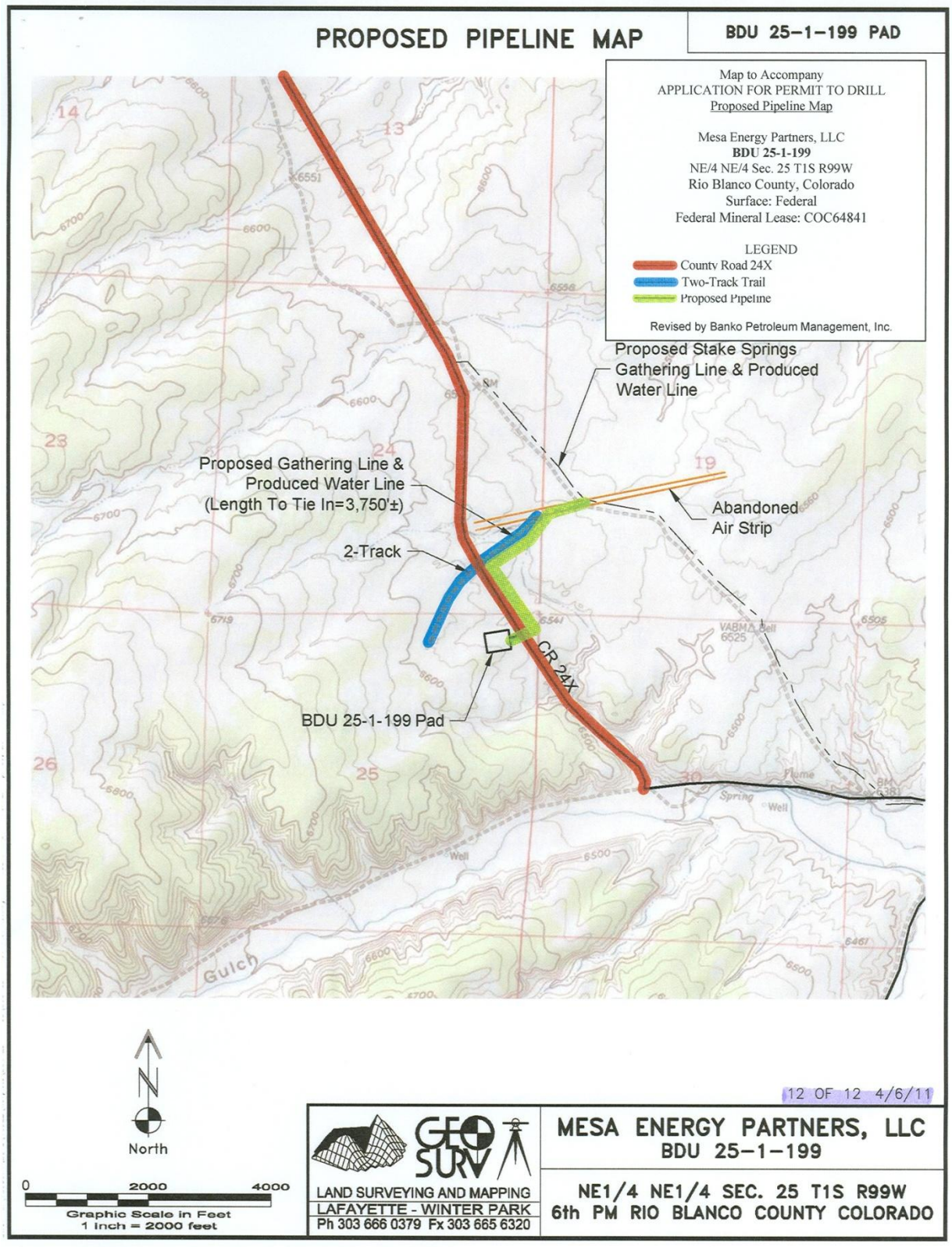
INTERDISCIPLINARY REVIEW:

Table 7. Interdisciplinary Review of Resource Areas of Concern

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights; Soils	12/07/2011
Zoe Miller	Ecologist	Areas of Critical Environmental Concern; Special Status Plant Species	7/27/11
Michael Selle	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	9/21/2011
Tyrell Turner	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	11/14/2011
Lisa Belmonte	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	12/06/2011
Christina Barlow	Natural Resource Specialist	Hazardous or Solid Wastes	12/08/2011
Chad Schneckenberger	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	12/6/2011
Jim Michels	Supervisory NRS	Forest Management	08/03/2011
Garner Harris	Zone Fire Management Officer	Fire Management	07/19/2011
Paul Daggett	Mining Engineer	Geology and Minerals	11/16/2011
Stacey Burke	Realty Specialist	Realty	11/14/2011
Melissa J. Kindall	Range Technician	Wild Horses	07/29/2011 and 11/04/2011
Christina Barlow	Natural Resource Specialist	Project Lead – Document Preparer	12/8/2011
Paul Kelley	Supervisory NRS	NEPA Compliance	12/18/2011

ATTACHMENTS: Figure 1: Project Map BDU 25-1-199

Figure 1: Project Map BDU 25-1-199



U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

Finding of No Significant Impact (FONSI)
DOI-BLM-CO-110-2011-0087-EA

BACKGROUND
Mesa Energy Partners, LLC proposes to construct one well pad, drilling one well on that pad. The proposed action includes constructing one 320 ft x 400 ft well pad and drilling one well on the pad (see Figure 1). The proposal indicates the applicant would construct a 190 ft (0.03 mi) access road off of CR 24X. In addition, the applicant will install 4,320 ft (0.82 mi) of gas gathering and produced waterline. The lines would be installed adjacent to the access road, then northwest along CR-24X, then northeast along an existing abandoned air strip to a tie-in point along the Stake Springs Gathering line. Total acres disturbed including overburden to construct the well pad, access road, and pipeline corridor would be approximately 10.56 acres (see Table 1 for pad dimensions and total area disturbed).

FINDING OF NO SIGNFICANT IMPACT
Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

Context
The project is a site-specific action directly involving BLM administered public lands that do not in and of itself have international, national, regional, or state-wide importance. The proposed well would be located in the Buckhorn Draw Unit.

Intensity
The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

1. Impacts that may be both beneficial and adverse. The impacts described in the 2011-0087-EA are all considered temporary and of low-intensity, provided the design features proposed in the SUPO and the proposed mitigation are implemented. Any adverse impacts would be of short duration, and are primarily associated with the direct removal of vegetation to construct the well pad; this impact would be mitigated by prompt interim reclamation following construction. The depletion of the hydrocarbon resource would be considered a beneficial impact as the product will contribute to local and national energy supply.

2. The degree to which the Proposed Action affects public health or safety.
There would be no impact to public health and safety if the proposed mitigation for solid and hazardous waste management is properly implemented and the development occurs consistent with the proposed design features described in the Drilling and SUPO.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. No parks, prime farmlands, wild and scenic rivers, or other areas of special environmental concern have been identified within the project area. One cultural site was identified during the inventory for the Proposed Action, and is considered eligible for nomination to the NRHP. As originally planned the well pad would have directly impacted the site. The well pad was moved north and west to avoid the site; however, the site is still very close to the new well pad location and could be impacted by development activity if proposed mitigation is not adequately implemented. Mesa has agreed to protect the site and its integrity during the life of the well pad.

4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial. The federal action of issuing a permit to drill for oil and gas resources has been routinely analyzed in site-specific EAs as well as in the White River Resource Management. There are several other wells and associated infrastructure (roads and pipelines) developed in the Buckhorn Draws Unit, and no public comment has been received to indicate the possible effects of the Proposed Action would be controversial.

5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk. No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action. Risk of harm to human health or the environment would be substantially reduced if the recommended mitigation for solid and hazardous waste management is properly implemented and/or adhered to.

6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. The federal action of issuing a permit to drill for oil and gas resources has been routinely analyzed in site-specific EAs as well as in the White River Resource Management.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Cumulative impacts to area resources have been reduced by placing the pipeline corridor over previously disturbed areas (i.e., the pipeline traverses a previously-disturbed abandoned air-strip and then follows alongside an existing county road). The reclamation plan in the operator's SUPO further reduces the cumulative significance of vegetative loss and soil disturbance by proposing prompt interim reclamation and stormwater control.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. Mitigation has been provided to protect the cultural resources eligible for listing in the NRHP. Any potential adverse effects have been mitigated. Furthermore, the operator takes responsibility for the loss of or damage to any cultural resources with commencement of operations, or within thirty days of issuance of the APD (whichever occurs first).

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973.
There are no threatened or endangered animal species that are known to inhabit or derive important use from the project area. The Wyoming big sagebrush habitats that encompass the project area provide habitat for Brewer's sparrow, a BLM sensitive species and one listed by the U.S. Fish and Wildlife Service (FWS) as a Bird of Conservation Concern. Mitigation has been provided to protect the Brewer's sparrow and other migratory birds. There are no special status plant species concerns associated with the Proposed Action. The nearest population of occupied threatened plant species are more than 2 miles to north and will not be impacted by the Proposed Action.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.
Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment. The operator certified in their SUP that they are aware of all existing local, state, and federal rules and regulations related to the proposed oil and gas development, and takes full responsibility of its actions and those of its contractors or subsidiaries.

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Field Manager

DATE SIGNED: 12/23/2011

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

DECISION RECORD

PROJECT NAME: Buckhorn Draw Unit well pad: COC64841: 25-1-199

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-CO-2011-0087-EA

DECISION

It is my decision to implement the Proposed Action (Alternative A), as mitigated in DOI-BLM-CO-2011-0087-EA, authorizing the construction, operation, and maintenance of the BDU 25-1-199 well.

Mitigation Measures:

Air Quality

1) The operator shall employ dust suppression techniques as outlined in the SUPO whenever there is a visible dust trail behind vehicles during the construction and drilling phases of the Proposed Action. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.

Soil Resources

2) A minimum of six inches of topsoil will be salvaged and stored undisturbed, seeded, and covered with erosion fabric to preserve the soil characteristics for interim reclamation.

3) Mesa Energy will line the secondary containment for the tank batteries with a 24 mil liner in order to protect soils from tank and offloading leaks and spills.

4) All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of three inches unless there are safety concerns or activities otherwise approved by the Authorized Officer (AO).

5) If erosion features such as rilling, gullying, piping, and mass wasting occur at any time in the future on disturbed surfaces, the erosion features will be addressed immediately after observation by contacting the AO and submitting and implementing a plan to assure successful soil stabilization with BMPs to address the erosion problems.

Surface and Ground Water Quality

6) To protect surface waters below the project area, keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.

7) When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

Vegetation

8) In addition to the design features submitted by the applicant in the SUPO, the applicant shall use seed that is certified and free of noxious weeds. All seed tags will be submitted to the designated Natural Resource Specialist within 14 calendar days from the time the seeding activities have ended via SN. The SN will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

Migratory Birds

9) Pad and pipeline construction will be completed prior to May 15 or after June 15 to avoid conflict with BLM migratory bird breeding survey. Mesa will contact BLM biologists immediately if construction plans change.

10) The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds, and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

Wild Horses

11) During the foaling period, March 1 to June 15, if BLM determines wild horses are in the vicinity of the proposed project, the project activities may be delayed for a specific 60-day period from within the window of March 1 to June 15, as outlined by the White River ROD/RMP, to reduce impacts during this sensitive time period.

12) Should the proposed action occur simultaneous with a wild horse gather, all project-related traffic would need to be coordinated with the BLM and the contractor for the gather operation.

13) To minimize the incidents of young foals becoming dislocated from their dam (mare), crews would be required to slow or stop when wild horses are encountered, allowing the bands to move away at a pace slow enough so that foals can keep pace and are not separated.

14) All installed cattleguards associated with the project will be upgraded to a horse proof cattleguard so that the risk of wild horses becoming trapped in them is reduced.

Cultural Resources

15) Mesa is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. Mesa will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. Mesa, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.
16) Mesa Energy Partners, L.L.C (Mesa) assumes responsibility for the integrity of site 5RB.6013 for the duration of the life or operation of Buckhorn Draw Unit 25-1-199 well. This includes, but may not be limited to, the yearly monitoring of site 5RB.6013 through an approved archaeological consultant. It shall also include any stabilization or data recovery, through an approved archaeological consultant, necessitated by site degradation, whether resulting from construction and operation of features on the Buckhorn Draw Unit 25-1-199 well, vandalism, erosion, or any other cause. *See* Beartooth Oil & Gas Co. (January, 1985; 85 IBLA 11).

17) Pursuant to 43 CFR 10.4(g), Mesa must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), Mesa must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

Paleontological Resources

18) If any paleontological resources are discovered as a result of operations under this authorization, Mesa or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

19) Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock.
20) Mesa is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands. If any paleontological resources are discovered as a result of operations under this authorization, Mesa must immediately contact the appropriate BLM representative.
21) If it becomes necessary at any time to excavate into the underlying sedimentary rock formations to level the well pad, excavate the reserve/blooie/cuttings pits or excavate a trench to bury the well tie pipelines an approved paleontological monitor shall be present prior to the initiation of any such excavations and until the project is completed.

Native American Religious Concerns

22) Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.

Visual Resources

23) All permanent (onsite for six months or longer) structures, facilities, and equipment placed onsite shall be painted and maintained using the BLM Standards Environmental Color Chart Juniper Green within six months of installation.

Hazardous or Solid Wastes

24) All lessees and/or operators and right-of-way holders shall comply with all federal, state and/or local laws, rules, and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.

25) Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.

26) Through all phases of oil and gas exploration, development, and production, all lessees and/or operators and holders of rights-of-way shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing: a) emissions, b) fresh water use, and c) utilization, production, and release of hazardous material.

27) All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

28) Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

29) As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.

30) As a reasonable and prudent lessees/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground), and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground), and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

31) With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the right-of-way holder and the lessee/operator, and through the right-of-way holder and lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

Rangeland Management

32) Any range improvement projects such as fences, water developments, or other livestock handling/distribution facilities that are damaged or destroyed as a direct or indirect result of implementation of the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.

Realty Authorizations

33) All activities would be required to comply with all applicable local, state, and federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and RBC permits, implementing all applicable mitigation measures required by each permit, and effectively coordinating with existing facility ROW holders.

34) The holder shall provide the BLM AO with data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS) to accurately locate and identify the ROW and all constructed infrastructure (as-built maps) within 60 days of construction completion.

35) Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or at last resort, (3) AutoCAD .dwg or .dxf files. Option 2 is highly preferred. In ALL cases the data must be submitted in Universal Transverse Mercator (UTM) Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact

disk (CD) in compressed (WinZip only) or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the Content Standards for Digital Geospatial Metadata from the Federal Geographic Data Committee standards. Questions should be directed to WRFO BLM GIS staff at (970) 878-3800.

36) RBC Road & Bridge Department shall be contacted and any permits obtained prior to any construction activity adjacent to or within the ROW for County Road 24X.

37) Construction activity should take place entirely within the areas authorized in the ROW grants and temporary use permit.

Access and Transportation

38) A BLM approved dust suppressant will be applied to road surfaces as necessary to reduce the fugitive dust to improve travel route safety.

COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN

This decision is in compliance with the Endangered Species Act and the National Historic Preservation Act. It is also in conformance with the 1997 White River Record of Decision/Approved Resource Management Plan.

ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT

The Proposed Action was analyzed in DOI-BLM-CO-2011-0087-EA and it was found to have no significant impacts, thus an EIS is not required.

PUBLIC INVOLVEMENT

Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 4/11/2011. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on 5/10/2011.

RATIONALE

The impacts described in the 2011-0087-EA are all considered temporary and of low-intensity, provided the design features proposed in the SUPO and the proposed mitigation are implemented. Any adverse impacts would be of short duration, and are primarily associated with the direct removal of vegetation to construct the well pad; this impact would be mitigated by prompt interim reclamation following construction. The depletion of the hydrocarbon resource would be considered a beneficial impact as the product will contribute to local and national energy supply.

ADMINISTRATIVE REMEDIES

State Director Review

Under regulations addressed in 43 CFR 3165.3(b), any adversely affected party that contests a decision of the Authorized Officer may request an administrative review, before the State Director, either with or without oral presentation. Such request, including all supporting documentation, shall be filed in writing with the BLM Colorado State Office at 2850 Youngfield

Street, Lakewood, Colorado 80215 within 20 business days of the date such decision was received or considered to have been received. Upon request and showing of good cause, an extension may be granted by the State Director. Such review shall include all factors or circumstances relevant to the particular case.

Appeal

Any party who is adversely affected by the decision of the State Director after State Director review, under 43 CFR 3165.3(b), of a decision may appeal that decision to the Interior Board of Land Appeals pursuant to the regulations set out in 43 CRF Part 4.

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Field Manager

DATE SIGNED: 12/23/2011